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(54) Insect trap

(57) The Insect Trap comprises a box-like container 1 on which is positioned a slide lid 2, the lid being moved by a spindle 4 on which is a surface 3 which adheres to a mutually-bondable surface 3 on the lid which is opened and closed as the spindle is turned. The mutually-bondable surfaces e.g. hook and loop material, preventing the lid from opening involuntarily and allowing the insect to escape before the lid is opened by the user of the trap.

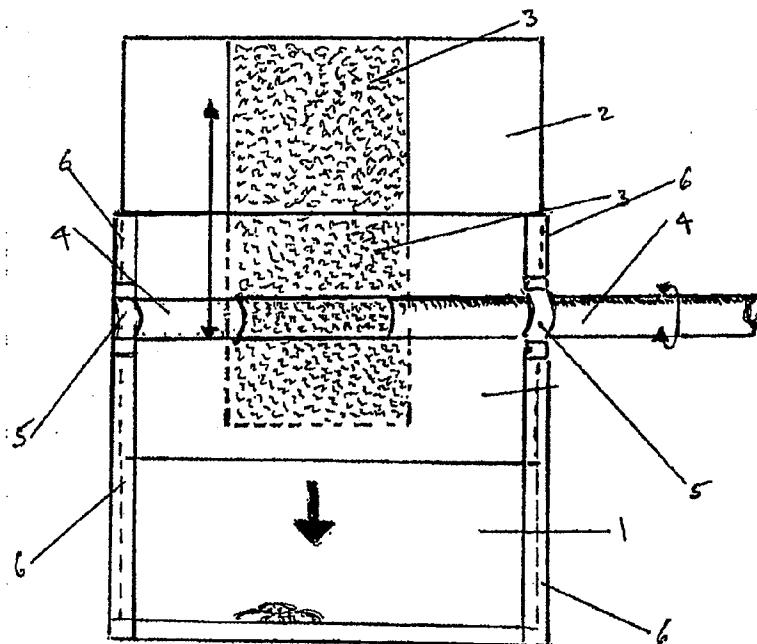


FIG 1

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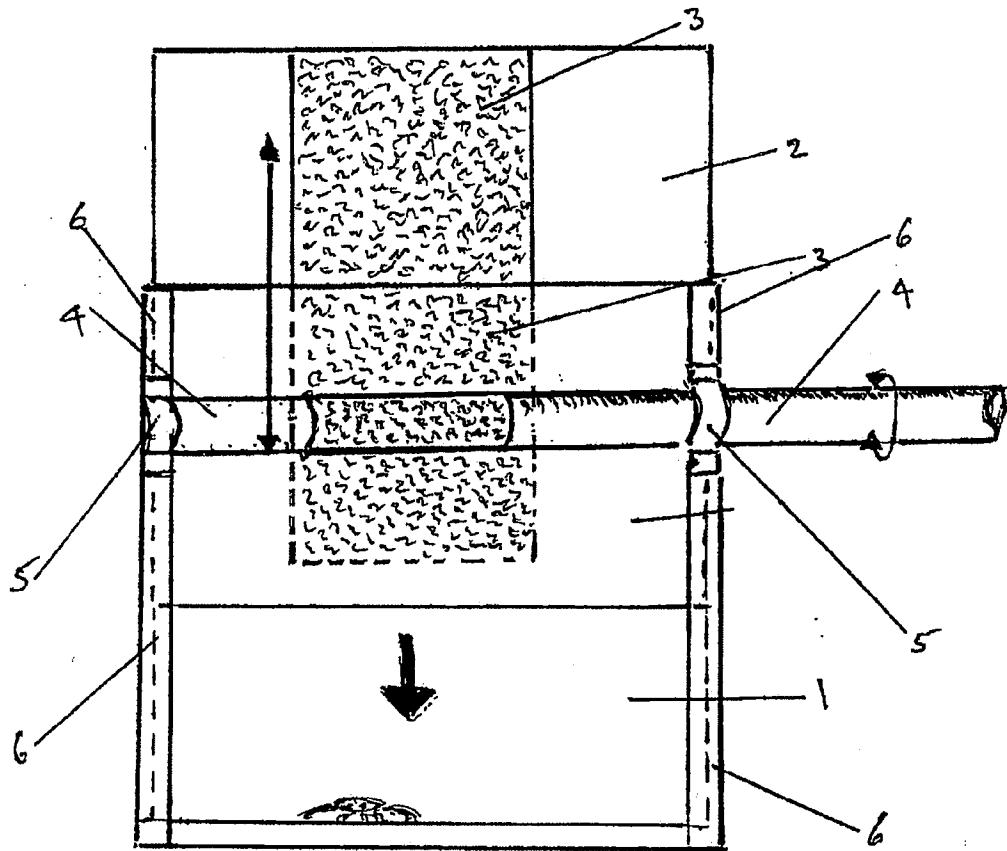


FIG 1

2 | 3

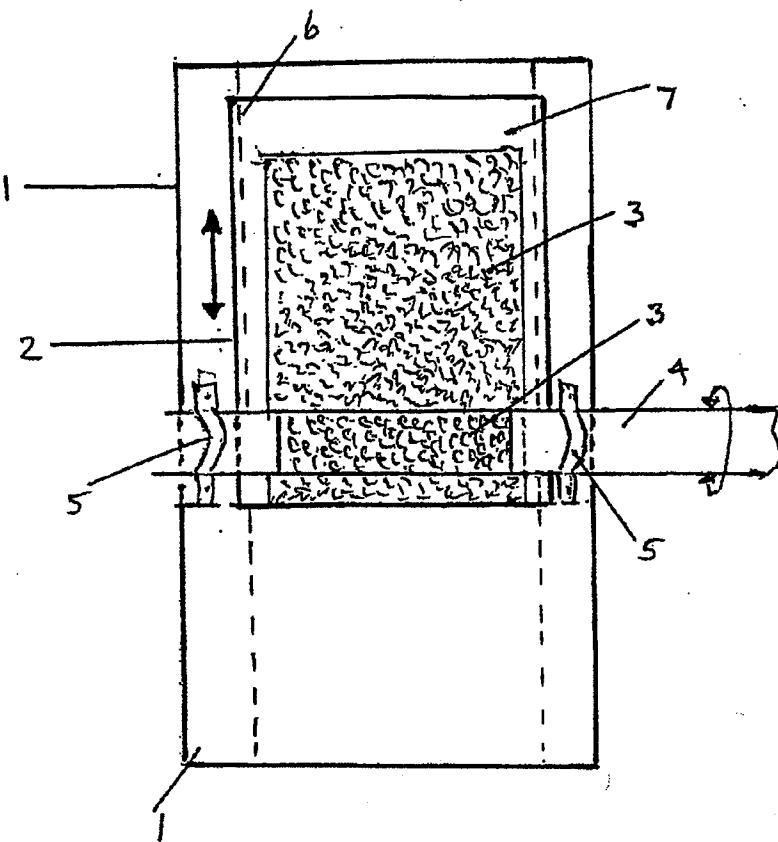


FIG 2

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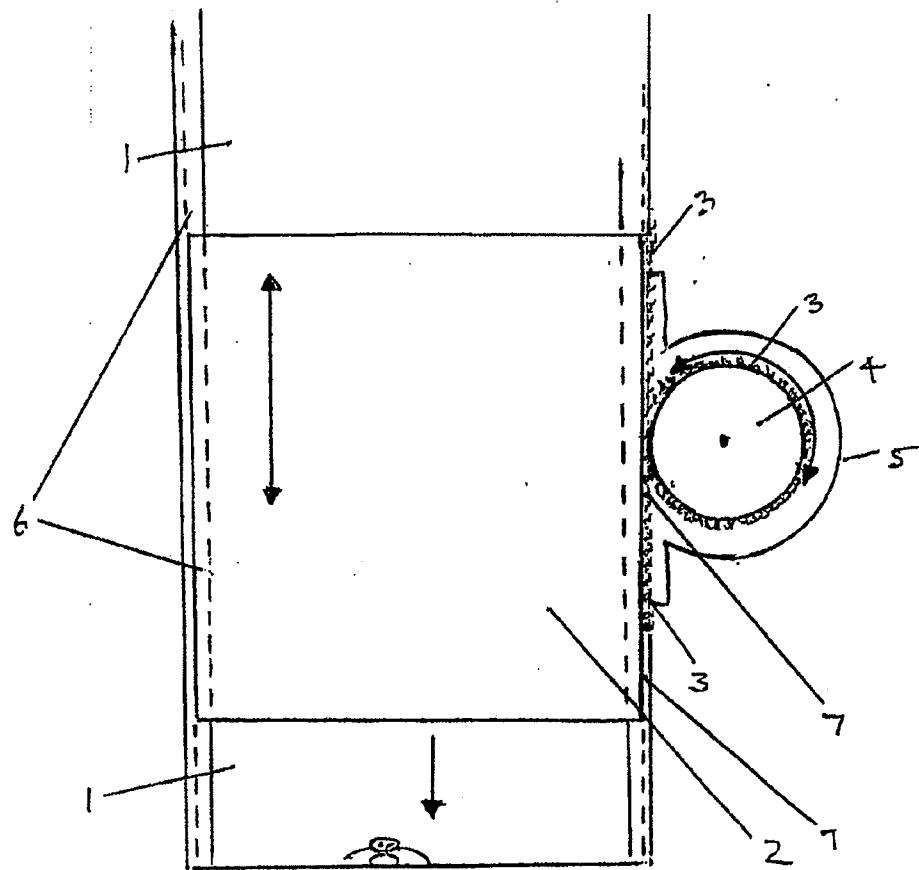


FIG 3

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INSECT TRAP

BACKGROUND OF THE INVENTION

This concerns a method by which an insect or animal may be trapped and retained in or released from a trap with a slide lid that can be opened and closed by turning a spindle.

There are a number of types with slide lids and most of them rely on two grooves or projections along which the lid slides by gravity if vertically positioned or by being pushed if positioned horizontally. There is such an insect trap that has such a slide lid which when the box or container is turned one way the lid slides open or closed by gravity. The disadvantage of gravity operation is that the lid could open involuntarily, whilst the closure of the lid is reliant upon a perfect slide fit of the lid causing jamming of the lid if incorrectly handled or if used in varying climatic conditions that can cause expansion or contraction of the materials used.

The object of the present invention is to provide a means of opening and closing sliding lids fitted to insect traps in which the lid may be opened or closed leaving the lid in any position as required without slippage and which can be kept closed to prevent the escape of the animal or insect or to prevent it falling out of the container if so required.

According to the invention an animal or insect trap with a slide lid in which the lid is moved by a spindle on which is a surface which adheres to a mutually-bondable surface on the lid which is opened and closed as the spindle is turned.

The invention shall now be described by the preferred embodiments and by the drawings that shall be by way of example only in which:-

FIG 1 shows a side view of a lid operated by a spindle running parallel to the lid mutually-bondable surfaces being on the spindle and the lid.

FIG 2 a side view of a lid on a container operated by a spindle placed at rightangles to the front face of the sliding lid mutually-bondable surfaces being positioned at rightangles to the closing or opening face of the lid and on the spindle.

FIG 3 front view showing end of spindle.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIG 1 a container 1 has a sliding lid 2 on which is fixed velcro the Trade Mark used for hook and loop material 3 often used in the clothing trade, and of course other mutually-bondable material could instead be used. The mutually-bondable material can be fixed either to the inner or outer face of the lid. A spindle 4 is located on the container preferably through a hole or bearing on each side of the container 1. Such a bearing or hole is shown as 5. and positioned so that the spindle is parallel to the lid that may be slideably-fixed or located in grooves or along fixings or other protrusions on the container. Such grooves are shown as 6. On the spindle is fixed mutually-bondable material. Such material, that will adhere together as the spindle is turned can be in the form of a gear cut or formed in the spindle that engages with a substantially flat sheet of geared or grooved surface of the lid. Such gearing or grooving can be formed in a plastic sheet for example. The gear on the spindle can be cut or formed in a sleeve fixed over the spindle. If hook and loop material is used the whole or part of the spindle could be made from such composite material. It will in some instances for example when trapping an insect against a window pane or wall be preferable to locate the spindle at right-angles to the lid to enable the insect to be trapped at some distance away from the user and in FIG 2 this is illustrated by having attached or formed in the lid a fin or extension 7 against which the spindle which is pointed in the direction of the window or wall for example enabling the spindle to be positioned parallel to the said fin or extension. When the spindle 4 which may be located in a bearing 5 is turned clockwise or anti-wise the two mutually-bondable 3 surfaces fixed to the said spindle 4 and fin adhere, and the lid 2 slides up or down the slides or guides 6 and the said lid will remain fixed in any position desired by the operator of the trap. The advantage of hook and loop material in particular is that it holds the lid in any position as soon as the operator stops turning the spindle and when the lid is closed it will not generally open again involuntarily, thus allowing the user to release the insect or animal when necessary or to enable the user to retain it in the box for inspection or educational purposes.

The spindle may be extended to form a handle and may be positioned inside a tube 8 and operated by a knob 9 at its end or by a projection 10 on the spindle 4 protruding through a cavity or slot 11 in the tub. thus enabling adjustment to be made and the lid to be operated using one hand only - of particular benefit when trapping insects some distance from

the floor or for those insects that could possibly bite or sting an operator standing too close to the insect or animal being trapped, such a feature being incorporated in my application for an Insect Remover No:-

* At time of this application number * not issued.

The extension on the lid can be an angle on the lid also shown in FIG 3 in which the spindle is 4 the mutually-bondable material 3 on the spindle 4 and the angled extension 7. The front face of the lid is 2 sliding in slots or groove 6 one groove only is visible. FIG 3 is a front view. The bearingas in which the spindle 4 rotates is shown as 5.

The surface on which the mutually-bondable material is fixed may be of any shape but it will be appreciated that preferably it shall be a board or plate like surface and most lids have such a surface and the angle or fin 7 shall also preferably comprises such a surface. The spindle may be sprung-loaded as can the lid.

The fin co-extention plate in which the mutually-bondable material is fixed and against which the mutually bondable material on the spindle is positioned may be fixed to pivot on the container 1 so that the spindle may also pivot at an angle to enable the user to trap insects on a high wall for example. The spindle may be located inside at least one tube.

CLAIMS

1. An Insect Trap in which a lid is slideably positioned on a container by turning a spindle the surface of which is mutually-bondable to a part of the lid, said lid opening and closing as the spindle is turned clock-wise and anti-clock-wise.
2. An Insect Trap as claimed in Claim 1 in which the mutually-bondable surfaces are characterised by a geared spindle engaging with gears cut in the lid to form a rack and pinion mechanism.
3. An Insect Trap as claimed in Claim 1 in which the mutually-bondable surfaces are characterised by at least one magnet attracted to its opposit surface.
4. An Insect Trap as claimed in Claim 1 in which the mutually-bondable surfaces are characterised by at least one surface being made for composit mutually-bondable materials.
5. An Insect Trap as claimed in Claim 1 in which the mutually-bondable surfaces are characterised by hook and loop material.
6. An Insect Trap as claimed in Claim 1 in which the part of the lid against which the mutually-bondable surface along the spindle adhers is characterised by being substantially at rightangles to the broader surfaces of the lid.
7. An Insect Trap as claimed in Claim 1 in which the part of the lid against which the mutually-bondable surface along the spindle adhers is characterised by being substantially parallel to the broader surfaces of the lid.
8. An Insect Trap as claimed in Claims 1 and 6 in which the part of the lid against which the mutually-bondable surface along the spindle is characterised by a fin-shaped fixture to the lid.
9. An Insect Trap as claimed in Claims 1 and 6 in which the part of the lid against which the mutually-bondable surface along the spindle adhers is characterised by an angled extension of the lid.
10. An Insect Trap substantially as herein described in the preferred embodiments of this invention and in the drawings that are by way of example only.

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Patents Act 1977
Examiner's report to the Comptroller under
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Application number
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Relevant Technical fields

(i) UK CI (Edition L) A1M (MDB; MDH)
(ii) Int CI (Edition 5) A01M 3/00; 23/00; 23/02; 23/16
) 23/20

Search Examiner

K J KENNEDY

Databases (see over)

(i) UK Patent Office
(ii)

Date of Search

6 OCTOBER 1993

Documents considered relevant following a search in respect of claims

1-10

| Category (see over) | Identity of document and relevant passages | Relevant to claim(s) |
|--------------------------------|---|---------------------------------|
| | NONE | |

| Category | Identity of document and relevant passages | Relevant to claim(s) |
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X: Document indicating lack of novelty or of inventive step.

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